The data has been acquired, revised and processed with EMPower2, a software tool for data processing and management developed by Phoenix Geophysics ([EMPower Software|Phoenix Geophysics](https://www.phoenixgeophysics.com/empower-software)). This software is based on robust processing, in which outliers are masked from the database in order to obtain smoother curves.

The data from the 8 sites of Caldanelle has been processed following three main steps: 1) Robust processing of the raw curve obtained after the frequency-domain transformation of the time series. 2) Application of apparent resistivity and phase masks to reject outliers manually. 3) Application of time masks in some sites with punctual high interferences during the recordings.

The data has to be reviewed before processing to correspond the actual field characteristics of the campaign, such as the dipole lengths or serial numbers of magnetic sensors. The robust processing option and its values are selected after this step. Two cross-power datasets will be obtained, one for the raw data and a second one for the robust processing results.

The program allows the application of different masks that can be applied automatically in all frequencies of the cross-powers, preferably in the dataset obtained from the robust processing. These masks are useful to cover values and outliers that differs from the main values. They are also useful to discard clusters coming from noise sources, as in the case of bimodal distribution that can be seen in the polar diagram. (FIGURE…)

For each site, values of apparent resistivity and phase for XY and YX are checked manually in every frequency. If the data distribution in the polar diagram is out of quadrant or with bimodal distribution, the phase mask is adjusted to fit the values that corresponds to the natural signal. Simultaneously, values of apparent resistivity that differs the medium value are masked too, leading to smoother curves.

In some sites with punctual interferences, per example measurements of Electromag near the site, a time mask has been used to avoid such noise.